

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 11160290  
PUBLICATION DATE : 18-06-99

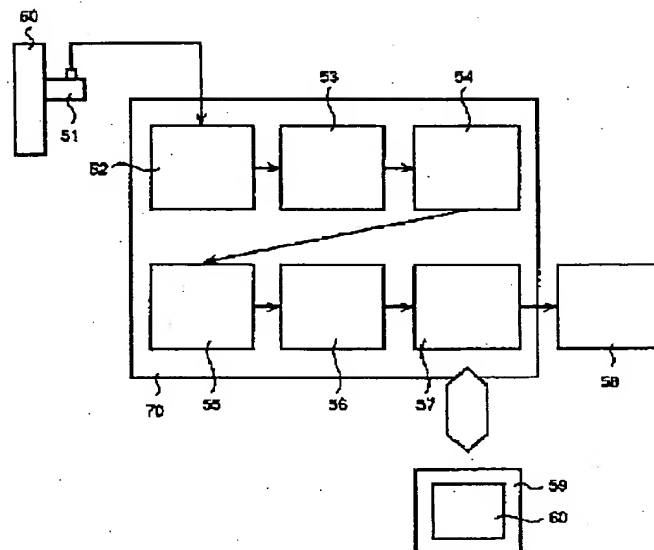
APPLICATION DATE : 01-12-97  
APPLICATION NUMBER : 09329861

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INT.CL. : G01N 29/14

TITLE : METHOD AND APPARATUS FOR  
DIAGNOSING FAN MOTOR



**ABSTRACT :** PROBLEM TO BE SOLVED: To surely judge a state before a fan motor stops by obtaining a diagnosis parameter with the use of an acoustic emission(AE) signal detected from a rotary part, comparing the parameter with a preliminarily determined set value and judging an abnormal state, etc.

**SOLUTION:** An output signal of an AE sensor 51 is taken into an amplification part 52 of a fan motor-diagnosing apparatus 70. An amplified waveform signal is subjected to envelope detection at a waveform-processing part 53, so that the output signal of the sensor 51 is converted into an envelope signal. The envelope signal is converted by an A/D converter 54 into a digital signal and stored in a RAM. A parameter calculation part 55 calculates a waveform average level, a waveform change width of signals detected by the sensor 51, and a generation count of sudden waves. A diagnosis part 56 compares these parameters with set values and displays at a display part 58 in which of a steady state, a cautionary state and an abnormal state a fan motor 50 is held. A personal computer 59 is connected to the diagnosing apparatus 70, which forms a trend of diagnosis results, etc., by a trend management software 60.

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